VOLUME CONTENTS

VOLUME 22, 1997

Number 1

Martin E. Feder	1	Necrotic fruit: a novel model system for thermal ecologists
Vincent A. Sharp, Barbara E. Brown and David Miller	11	Heat shock protein (hsp 70) expression in the tropical reef coral *Goniopora djiboutiensis*
Henry J. Harlow	21	Winter body fat, food consumption and nonshivering thermogenesis of representative spontaneous and facultative hibernators: the white-tailed prairie dog and black-tailed prairie dog
Susan R. Kayar, Erich C. Parker and Andrea L. Harabin	31	Metabolism and thermoregulation in guinea pigs in hyperbaric hydrogen: effects of pressure
T. M. Brown-Brandl, M. M. Beck, D. D. Schulte, A. M. Parkhurst and J. A. DeShazer	43	Physiological responses of tom turkeys to temperature and humidity change with age
Gary C. Packard and Mary J. Packard	53	Type of soil affects survival by overwintering hatchlings of the painted turtle
Christopher J. Gordon and Ying Yang	59	Contribution of spontaneous motor activity to the 24 hour control of body temperature in male and female rats
C. J. Duncan	69	An hypothesis for preconditioning and heat shock proteins: a model for elucidating damage pathways in the heart?
Randi Oppermann Moe and Morten Bakken	79	Effect of indomethacin on LPS-induced fever and on hyperthermia induced by physical restraint in the silver fox (*Vulpes vulpes*)
Announcements	1	

Number 2

B. Ann Becker, John J. Klir, Robert L. Matteri, Donald E. Spiers, Mark Ellersiek and Michael L. Misfeldt	87	Endocrine and thermoregulatory responses to acute thermal exposures in 6-month-old pigs reared in different neonatal environments
Anita Soni and Surender S. Katoch	95	Structural and metabolic changes in skeletal muscle of cold acclimated rats
Winston C. Lancaster, Susan C. Thomson and John R. Speakman	109	Wing temperature in flying bats measured by infrared thermography
Charles R. Caldwell, Merle M. Millard and Michael J. Line	117	Magnetic resonance imaging of tissue-specific thermal responses of geranium stem *in vivo*
Regina M. McDevitt and J. F. Andrews	127	Seasonal variation in brown adipose tissue mass and lipid droplet size of *Sorex minutus*, the pygmy shrew; the relationship between morphology and metabolic rate
Margaret A. Kolka and Lou A. Stephenson	137	Interaction of menstrual cycle phase, clothing resistance and exercise on thermoregulation in women

Ghazala Hashmi, Sarwar Hashmi, Sen Selvan, Parwindar Grewal and Randy Gaugler 143 Polymorphism in heat shock protein gene (*hsp*70) in entomopathogenic nematodes (rhabditida)

M. S. Parihar, Tarangini Javeri, Taruna Hemnani, A. K. Dubey and Prem Prakash 151 Responses of superoxide dismutase, glutathione peroxidase and reduced glutathione antoxidant defenses in gills of the freshwater catfish (*Heteropneustes fossilis*) to short-term elevated temperature

Book Review
Yasutaka Osada 157 Environmental Egonomics—Recent Progress and New Frontiers—Edited by Y. Shapiro, D. S. Moran and Y. Epstein

Number 3

A. Shitzer, L. A. Stroschein, M. W. Sharp, R. R. Gonzalez and K. B. Pandolf 159 Simultaneous measurements of finger-tip temperatures and blood perfusion rates in a cold environment

Karin Morgan 169 Thermal insulance of peripheral tissue and coat in sport horses

Karin Morgan, Anders Ehrlemark and Krister Sällvik 177 Dissipation of heat from standing horses exposed to ambient temperatures between −3°C and 37°C

Karin Morgan 187 Effects of short-term changes in ambient air temperature or altered insulation in horses

Shi-Qiang Wang, Hong-Mei Cao and Zeng-Quan Zhou 195 Temperature dependence of the myocardial excitability of ground squirrel and rat

V. Y. Vasilenko, T. A. Petruchuk, R. A. Wallis and V. N. Gourine 201 Effects of temperature on neuronal bursting in guinea-pig hippocampal slices

N. Chaiyabutr, S. Komolvanich, S. Sawangkoon and S. Chanpongsang 207 Alterations in potassium homeostasis during heat stress in swamp buffaloes (*Bulbalus bubalis*)

David Berrigan 213 Acclimation of metabolic rate in response to developmental temperature in *Drosophila melanogaster*

A. Haim, K. Shachaf, N. Zisapel and R. J. Reiter 219 Daily rhythms of body temperature in *Acomys russatus*: their response to photoperiod manipulations and melatonin

Roland Prinzinger, Volker Dietz and Birgit Nagel 223 Respiratory quotient and embryological development of metabolic heat production in the rhea (*Rhea americana*)

Numbers 4/5

H. Yoshikawa, Y. Ishida, S. Nakamura and H. Matsui 227 Effects of acute thermal changes on cerebral blood flow and electroencephalograms in curarized carp

M. A. Abu Hatab and R. Gaugler 237 Influence of growth temperature on fatty acids and phospholipids of *Steinernema riobravis* infective juveniles

Ganpat B. Jagdale and Roger Gordon 245 Effect of temperature on the composition of fatty acids in total lipids and phospholipids of entomopathogenic nematodes

D. J. McCafferty, J. B. Moncrieff and I. R. Taylor 253 The effect of wind speed and wetting on thermal resistance of the barn owl (*Tyto alba*). I: Total heat loss, boundary layer and total resistance

D. J. McCafferty, J. B. Moncrieff and I. R. Taylor	265	The effect of wind speed and wetting on thermal resistance of the barn owl (*Tyto alba*). II: Coat resistance
Candace B. Matthew	275	Heat acclimation in telemetry equipped rat
Roberto Refinetti	281	The effects of ambient temperature on the body temperature rhythm of rats, hamsters, gerbils, and tree shrews
R. L. Korthals, Y. R. Chen, G. L. Hahn and R. A. Eigenberg	285	Calculation of fractal dimension from cattle thermoregulatory responses
Atanas T. Atanasov and Borislav D. Dimitrov	295	Effect of local cooling on skin temperature restoration time for fingers of the upper extremities
Robert T. Gemmell, Scott J. Turner and William J. Krause	301	The circadian rhythm of body temperature of four marsupials
M. Hernández Rodríguez and L. F. Bückle Ramirez	309	Thermal preference area for *Macrobrachium tenellum* in the context of global climatic change
Christopher J. Gordon	315	The role of behavioral thermoregulation as a thermoeffector during prolonged hypoxia in the rat
Sara L. Frears, Steven L. Chown and Peter I. Webb	325	Behavioural thermoregulation in the mopane worm (Lepidoptera)
Kenneth K. Kraning II* and Richard R. Gonzalez	331	A mechanistic computer simulation of human work in heat that accounts for physical and physiological effects of clothing, aerobic fitness, and progressive dehydration
Margaret A. Kolka, Leslie Levine and Lou A. Stephenson	343	Use of an ingestible telemetry sensor to measure core temperature under chemical protective clothing
Narihiko Kondo, Hirotaka Tominaga, Tomoyuki Shiojiri, Manabu Shibasaki, Ken Aoki, Seiji Takano, Shunsaku Koga and Takeshi Nishiyasu	351	Sweating responses to passive and active limb movements
Xiuxian Li and Hiromi Tokura	357	Lower critical temperature under the influences of seasonal cold acclimatization due to the two types of clothing
Announcement	I	

Number 6

Geoff Goldspink	365	Obituary
L. Gauvry, V. Mohan-Ram, C. Ettelaie, S. Ennion and G. Goldspink	367	Molecular motors designed for different tasks and to operate at different temperatures
Shugo Watabe, Yasushi Hirayama, Misako Nakaya, Makoto Kakinuma, Kiyoshi Kikuchi, Xiao-Feng Guo, Satoshi Kanoh, Shigeru Chaen and Tatsuo Ooi	375	Carp expresses fast skeletal myosin isoforms with altered motor functions and structural stabilities to compensate for changes in environmental temperature
Genevieve K. Temple and Ian A. Johnston	391	The thermal dependence of fast-start performance in fish
Stuart Egginton	403	Control of tissue blood flow at very low temperatures
B. Tota, M. C. Cerra, R. Mazza, D. Pellegrino and J. Icardo	409	The heart of the Antarctic icefish as paradigm of cold adaptation

N. M. Whiteley, E. W. Taylor and **A. J. El Haj**	419	Seasonal and latitudinal adaptation to temperature in crustaceans
Peter Convey	429	How are the life history strategies of Antarctic terrestrial invertebrates influenced by extreme environmental conditions?
Jean R. David, Patricia Gibert, Emmanuelle Gravot, Georges Petavy, Jean-Philippe Morin, Dev Karan and **Brigitte Moreteau**	441	Phenotypic plasticity and developmental temperature in Drosophila: analysis and significance of reaction norms of morphometrical traits
Pat Willmer and **Graham Stone**	453	Temperature and water relations in desert bees
Carlos A. Navas	467	Thermal extremes at high elevations in the Andes: physiological ecology of frogs
John Davenport	479	Temperature and the life-history strategies of sea turtles
P. J. W. Olive, J. Fletcher, S. Rees and **G. Desrosiers**	489	Interactions of environmental temperature with photoperiod in determining age at maturity in a semelparous Polychaete *Nereis* (*neanthes*) *virens* sars